

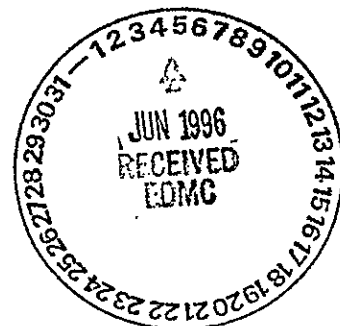
3320-SCU-067  
0044245

# SDG Memo/Sample Summary

Client Name: WESTINGHOUSE HANFORD CO. Date: 16 Oct 1992  
Project Name: SITE WIDE IV Update No.:  
SDG No.: 3320 Work Order No.: 32359-42  
Project Manager: J. DEWALD  
Mail Date:

Client Samp No.	S-Cubed Samp No.	Date Rcvd	Date Samp	Matrix	ANIONS	FURN7000	HG7000	ICP6010	NO2/NO3	S	TALK	TC	TOC
BO6JC5	3320-01	9-22-1992	9-17-1992	SOIL	X	X	X	X	X	X	X	X	X
BO6JC5M8	3320-01M8	9-22-1992	9-17-1992	SOIL	X	X	X	X	X	X	X	X	X
BO6JC5REP	3320-01REP	9-22-1992	9-17-1992	SOIL	X	X	X	X	X	X	X	X	X

(X) = Non-Billable Sample



## **NARRATIVE**

October 20, 1992

**Narrative Project:** Site Wide IV  
**Reference No.:** 32359-42  
**Client:** WHC  
**SDG No.:** 3320

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### **METALS**

The samples were analyzed according to EPA Methods 6010 and the 7000 series for the TCL metals and Mo. No dilutions were required.

The quality control results were generally acceptable. Several MS recoveries were outside windows due to matrix effects. The duplicate RPD is slightly high for Pb. All soil LCS results are within advisory ranges.

### **ANIONS**

The samples were analyzed according to EPA Method 300.0 for anions. For soils, 9 gm of sample was leached into 45 ml of DI Type II water prior to IC analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **N-NO<sub>2</sub>/NO<sub>3</sub>**

The samples were analyzed according to EPA Method 353.3 for N-NO<sub>2</sub>/NO<sub>3</sub>. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **SULFIDE**

The samples were analyzed according to EPA Method 9030 for sulfide. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL ALKALINITY**

The samples were analyzed according to EPA Method 310.1 for total alkalinity. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

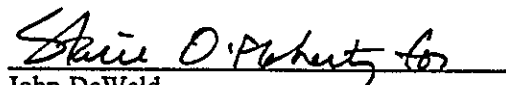
## ***NARRATIVE***

### **TOTAL CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL ORGANIC CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was measured and phosphoric acid was added to the soil. The mixture was placed in an oven at 70 C for one hour, then removed, cooled, and ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

  
John DeWald  
Project Manager

enclosures

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SAF # 92-193

Westinghouse  
Hanford Company

## CHAIN OF CUSTODY

Custody Form Initiator

Company Contact C.D. Kramer

Telephone (509) 376-4186

Project Designation/Sampling Locations Yakima Barricade  
Borehole #699-48-96 @ 634'

Collection Date 9/17/92

Ice Chest No. RM#7

Field Logbook No. EFL-1023

Bill of Lading/Airbill No. 252 156 738 9

Offsite Property No. W92-D-0648 #1

Method of Shipment Emery

Shipped to S-Cubed, 3398 Carmel Mt Rd, San Diego, CA 92121-1095

Possible Sample Hazards/Remarks None. Maintain at 4 degrees C.

## Sample Identification

B06JC5 - (1) 250-ml Amber Jar (Glass)

☐ Field Transfer of Custody

Chain of Possession

(Sign and Print Names)

Relinquished by: J.A. Knittel <i>J.A. Knittel</i>	Received by: C.D. Kramer <i>C.D. Kramer</i>	Date/Time: 9-18-92 1450P
Relinquished by: C.D. Kramer <i>C.D. Kramer</i>	Received by: <i>[Signature]</i>	Date/Time: 7/22/92 11:00
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

## Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:
Comments:		



est Day Deliver 7 - 21 - 92

S<sup>3</sup> Lot # 3320

Contractor <i>W. J. Hughes H. J. and Co.</i>	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) <i>W-5-0-0648 #1</i> <del>XXXX-XXXX-XXXX</del>
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PART I - TO BE COMPLETED BY ORIGINATOR

Department <i>Envi. Remed. En.</i>	Section <i>Envi. Remedial Action</i>	Unit <i>—</i>
The following items are to be shipped from <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Routing <i>Emergency</i> <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Shipped to <i>S-Cut 3398 Cornell Ave. Rd. San Diego, CA 92121-1095</i>		Off-site Custodian <i>John Dewald</i>
		Full Title <i>—</i>

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
<i>1</i>  <i>1 HE</i> <i>20 lbs.</i>	<i>Fully ice chest (RM # 7) containing a glass jar of soil packed in blue ice and vermiculite Sample # B06JC5</i>	

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

*Program not available onsite.*

*Bill of Lading # 252 156 738 9*

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release <i>RM. P. Hughes</i>	RM Survey No. <i>91069C</i>	Date <i>9-21-92</i>
Location of Property (Area & Bldg.) <i>MO-26, 300 Area</i>	Contact <i>JG Lucas / CD Krimer</i>	Phone <i>376-4186</i>
Date Ready for Shipment <i>9-21-92</i>	Cost Code to be Charged <i>FKIER 81220</i>	Approximate Date This Property will be Returned <i>NA</i>
Originated By <i>E. D. Krimer</i>	Date <i>9/21/92</i>	Authorized By <i>[Signature]</i>
Signature and Name of Property Control	Custodian Date <i>[Signature]</i>	Date <i>9/21/92</i>


PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient <i>[Signature]</i>	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date <i>9-21-92 1125</i>				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator
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<b>FORM OF PAYMENT</b>				<b>EMERY WORLDWIDE</b>				<b>A/CF Company</b>			
Check <input type="checkbox"/> Gbl <input type="checkbox"/> FCCOD <input type="checkbox"/>				Bill to Shipper <input checked="" type="checkbox"/> Bill to Consignee <input type="checkbox"/> Third Party Billing <input type="checkbox"/>				<b>SERVICES**</b> UNITED STATES / CANADA <input type="checkbox"/> Same Day (Extra Charges) <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM <input type="checkbox"/> Second Day <input type="checkbox"/> Saturday Delivery Date: <u>09-21-92</u> Origin: <u>PHO</u>			
Shipper's Account Number <b>E 850281585</b>				Shipment Number <b>252156738 9</b>				INTERNATIONAL Express <input type="checkbox"/> Business Documents <input type="checkbox"/> Standard Plus <input type="checkbox"/> Customs Clearance <input type="checkbox"/> Preferred <input type="checkbox"/> Standard <input type="checkbox"/> Delivery <input type="checkbox"/>			
From: <b>WESTINGHOUSE SHIPPING DEPT (509) 376-6665</b> <b>U.S. DEPARTMENT OF ENERGY C/O</b> <b>WESTINGHOUSE HANFORD</b> <b>BLDG 1143</b> <b>2355 STEVENS DRIVE</b> <b>RICHLAND WA</b>				To: <b>JOHN DEWALD</b> <b>S-CUBED</b> <b>3398 CARMEL MT. ROAD</b> <b>SAN DIEGO CA</b>				Tariff Dest. Gateway Declared Value \$ EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.			
Customer's Reference Numbers <b>W81220 PK1BB W92-0-0648#1 99352</b>				Consignee's Account Number <b>E 92121-1095</b>				FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)			
Description <b>1 ICE CHEST RM#7</b> <b>SOIL SAMPLES</b> <b>B06JCS</b>		Dimensions Pcs <b>1</b> L <b>11</b> W <b>16</b> H <b>17</b>		Total Pieces <b>1</b>		Total Weight (in lbs.) <b>20</b>		2521567389 			
Remarks <b>OVERNIGHT DELIVERY</b> <b>SIGNATURE SECURITY SERVICE</b> Shipper's Signature: <i>[Signature]</i>		Zip Ship <input type="checkbox"/>		Mark if Emery Packaging is used Urgent Letter <input type="checkbox"/> Urgent Pack <input checked="" type="checkbox"/>		Declared Value \$		<b>SAN-A</b> Terms and Conditions on Back			
International Shipments Free Domicile <input type="checkbox"/>		Third Party Account Number mandatory for Third Party Billing <b>E</b>		Third Party Account Number <b>E</b>		International Customs Value <b>00</b>		International Insurance Total Transportation Charges Other Charges (Advance at Origin) <input type="checkbox"/> OCAHO \$			

JD 9/22



## U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3320-01

Lab Name: S\_CUBED\_\_\_\_\_ Contract: 32359-42\_\_\_\_\_

Lab Code: S3\_\_\_\_\_ Case No.: SWIV\_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 3320\_\_\_\_\_

Matrix (soil/water): SOIL\_\_\_\_\_ Lab Sample ID: 3320-01\_\_\_\_\_

Level (low/med): LOW\_\_\_\_\_ Date Received: 09/22/92

% Solids: \_\_\_\_\_82.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9770	—	—	P
7440-36-0	Antimony	12.6	B	N	P
7440-38-2	Arsenic	0.73	U	N	F
7440-39-3	Barium	80.0	—	—	P
7440-41-7	Beryllium	0.73	B	—	P
7440-43-9	Cadmium	0.73	U	—	P
7440-70-2	Calcium	6340	—	—	P
7440-47-3	Chromium	19.1	—	—	P
7440-48-4	Cobalt	8.7	B	—	P
7440-50-8	Copper	20.3	—	—	P
7439-89-6	Iron	12300	—	—	P
7439-92-1	Lead	8.2	—	*	F
7439-95-4	Magnesium	6410	—	—	P
7439-96-5	Manganese	252	—	N	P
7439-97-6	Mercury	0.12	U	N	CV
7440-02-0	Nickel	20.6	—	—	P
7440-09-7	Potassium	2290	—	—	P
7782-49-2	Selenium	0.73	U	—	F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	346	B	—	P
7439-98-7	Molybdenum	2.4	U	—	P
7440-62-2	Vanadium	24.7	—	—	P
7440-66-6	Zinc	43.8	—	—	P
7440-28-0	Thallium	0.73	U	N	F

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture: \_\_\_\_\_

Color After: \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

B06JC5

FORM I - IN

7/88

011

## ANIONS ANALYSIS

PAGE 1 OF 1

LABORATORY: S-CUBED  
CLIENT: WHC  
PROJECT: SITE WIDE IV  
LOT #: 3320  
FILE #: ANI3320S  
DISK #: ANI0928  
METHOD NO.: 300.0  
UNIT: MG/KG

DATA REVIEWER: *WN 10/16*  
PROJECT REVIEWER:  
CHARGE #: 32359-42  
DATE SAMPLED: 09-17-92  
DATE RECEIVED: 09-22-92  
PREP DATE: 10-15-92  
DATE ANALYZED: 10-15-92  
SAMPLE TYPE: SOIL

LAB ID	F	CL	BR	O-PO4	SO4
3320-01	1.12	3.54	2.86	4.49	5.36

All GC requirement were met. A gm of soil was leached into 45 mL DI type H<sub>2</sub>O prior to IC analysis.

3 - CUBED

# Trace Inorganics Report

Client: WHC  
Project: SITE WIDE IV  
Sampling Date: 09/17/92

Analyst: EA  
Review: can 10/14  
Receipt. Date: 09/22/92

Analyte: NO2/NO3 - N

[illegible]

Method Detection Limit: 0.100 mg/L  
Preparation Method: 353.3  
Analytical Method: 353.3  
Preparation Date: 10/06/92  
Analysis Date: 10/07-10/08/92

UN = Units = (A=mg/kg B=ug/L C=mg/L) MT = Matrix = (S=Soil W=Water)

Comments: 10 gm soil was leached into 50 mL. All QC  
requirement were met. Concentration report as No. 1

S - CUBED

# Trace Inorganics Report

Client: WHC  
Project: SITE WIDE IV  
Sampling Date: 09-17-92

Analyst: EAT  
Review: UN 9/30  
Receipt. Date: 09-22-92

Analyte: S

[illegible]

Method Detection Limit: 2.000 mg/L  
Preparation Method: 9030  
Analytical Method: 9030  
Preparation Date: 09-25-92  
Analysis Date: 09-25-92

UN = Units = (A=mg/kg    B=ug/L    C=mg/L)    MT = Matrix = (S=Soil    W=Wate.

Comments: The sample was analyzed one day outside of holding time. All other QC were acceptable. 10.8 mg sample was leached into 50 mL prior to analysis.

Client: WHC  
Project: SITE WIDE IV  
Sampling Date: 09-17-92

Analyst: EA  
Review: AN 10/14  
Receipt. Date: 09-22-92

[illegible]

Method Detection Limit: 10.000 mg/L  
Preparation Method: 310.1  
Analytical Method: 310.1  
Preparation Date: 09-29-92  
Analysis Date: 09-30-92

UN = Units = (A=mg/kg B=ug/L C=mg/L) MT = Matrix = (S=Soil W=Water)

Comments: 10 gm soil was leach into 50 mL DI H<sub>2</sub>O prior to analysis. All QC requirement were met. 317